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CASE REPORT

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The Guard, His Gauntlet and Goblet- An Atypical Presentation of Pellagra in a Chronic Alcoholic

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Abstract

Alcoholism a chronic condition affects multiple organ systems including skin. Dermatological markers of alcohol abuse are invaluable. Despite this, association of skin diseases and alcohol misuse maybe overlooked or physicians fail to explore. Pellagra is a multifactorial disease caused by Niacin/Tryptophan deficiency. It exhibits photodermatitis, gastrointestinal and neuropsychiatric manifestations. Chronic alcoholics are at risk. Considering pellagra as differential diagnosis in chronic alcoholics with these symptoms is crucial. This disease is easily treatable but if missed proves fatal. Hence, its recognition is important in other clinical settings for comprehensive treatment. The pathognomonic presentation of Pellagra is the Casal necklace, but here we present a case of 34year old alcoholic with an atypical presentation of Pellagra. Chronic alcoholics need evaluation for Pellagra amongst other nutritional deficiencies which due to diverse presentation can be missed. Early diagnosis and treatment can avoid impending neuropsychiatric complications. Due to participation of numerous disciplines consultation liaison psychiatry is vital here.

Keywords: Alcohol dependence; Alcohol cutaneous manifestations; Pellagra; Niacin deficiency; Alcohol biomarkers

Background

Alcoholism a chronic condition affects multiple organ systems including skin[1]. Cutaneous markers of alcohol abuse are invaluable. Despite this, association of skin diseases and alcohol misuse maybe overlooked or physicians fail to explore.

Pellagra first described by Don Gasper Casal in 1735 is a multifactorial disease caused by Niacin/Tryptophan deficiency[2]. It exhibits photodermatitis, gastrointestinal and neuropsychiatric manifestations or the 4 D's. Chronic alcoholics are at risk[3]. Considering pellagra as differential diagnosis in chronic alcoholics with these symptoms is crucial. This disease is easily treatable but if missed proves fatal.

Hence, its recognition is important in other clinical settings for comprehensive treatment.

Case Report

Mr. R a 34-year-old married male from low socio-economic status previously employed as security guard in a medical college was referred from medicine where he presented seeking treatment for pain abdomen, and diarrhoea. After brief evaluation he was referred to psychiatry owing to history of alcohol use which seemed to be the root cause for all symptoms. Patient presented to psychiatry opd with 18 years of alcohol use suggestive of dependence pattern for past 14years, non-pervasive low mood for 6 months, pain abdomen, generalised weakness, nausea vomiting, significant weight loss, appetite disturbances for 4 months and diarrhoea for 20 days. His alcohol use precipitated in social setting, insidious onset, progressive course. Patient consumed 18-24units of spirits on average/day. Socio-occupational dysfunction and complaints at workplace due to alcohol use reported

No significant past/personal history. Discord with father + due to alcohol use. Patient was pre-morbidly well-adjusted.

GPE revealed tremors, tachycardia, beefy red tongue, oral ulcers and multiple distinct annular plaques with erythematous borders having hyperpigmented surrounding area with central clearing present over bilateral extensor aspects of forearms resembling a glove or Gauntlet. Patient didn't self-report this rather on enquiry mentioned blistering and peeling of skin associated with burning and tenderness over hands for 4 months and concerns about how it looked. There was no involvement of any other region like face, neck, feet etc. Systemic examination normal.

On MSE patient appeared apathetic, spontaneity of speech lost, reduced psychomotor activity, cravings +, motivation poor, depressive cognition +. Deficits in recent memory +.

Diagnosis

After complete and thorough history, examination and cross consultation with Dermatology Medicine and confirmation by Pathology, patient was diagnosed to have Mental & Behavioural disturbance due to use of Alcohol in Dependence Pattern - Withdrawal State - Uncomplicated

Organic Depressive Disorder, Alcoholic Liver Disease, Pellagra

Management

Patient advised IP care for deaddiction and evaluation and management of other symptoms. Cross reference done with Dermatologist and diagnosed as pellagra, advised Nicotinamide supplementation & skin biopsy.

Investigations

The following investigations were carried out-

CBC, RBS, RFT, TFT- (WNL), LFT- deranged, ECG, Chest X-Ray- Normal, CT Brain Plain- Normal, USG Abdomen & Pelvis- Grade 2, Hepatomegaly with fatty liver infiltration

Skin Biopsy- Punch Biopsy of Left Forearm: section showed dermis & epidermis showing hyperkeratosis, epidermal atrophy. Hyperpigmentation of basal layer present. Dermis showed lymphocyte infiltrate. IMPRESSION: Findings consistent with Pellagra.

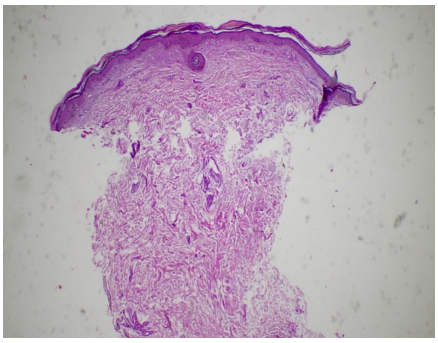


Fig 1. Punch Biopsy of Left Forearm- (Pellagroid Dermatitis)

Psychometry

Before treatment- AUDIT Scale: 30

MMSE: 24, HAM-D: 19 (moderate), After treatment- MMSE: 29, HAM-D: 16 (mild)

Treatment

T. DIAZEPAM 5MG QID tapered and stopped over 15 days

T. ESCITALOPRAM 10MG (1-0-0 tapered to 5MG

T. NICOTINAMIDE 250MG BD for 4 weeks

Inj. THIAMINE 200mg (1-0-0) x 7days then converted to Oral Tablets

Inj. OPTINEURON (1amp in 100ml NS) x 7days then converted to Oral Tablets

Inj. PANTOPRAZOLE 40mg 1-0-0

Inj. EMESET 4mg (1-1-1) x 3days

Syrup LACTULOSE 15ml HS

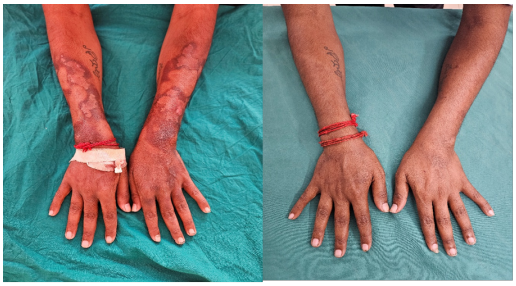
B PROTEIN Powder 1spoonful in water BD

LOTION SUNBAN (1-1-1)

Response

Patient was treated for alcohol detoxification, deaddiction, counselled regularly, holistically treated for skin lesions and supplemented with Nicotinamide and showed significant improvement within 1 week of starting treatment and complete recovery by 1month confirming diagnosis of Pellagra.

Patient showed 70-80% improvement and was compliant, well-motivated and came for regular follow-ups.



2a. Before (DAY 1) **2b.** After (DAY 31)

Fig 2. a. At the time of presentation, GAUNTLET OF PELLAGRA. b. Post treatment, at Follow up after discharge

Discussion

Pellagra is a chronic disease affecting integumentary, CNS and GIT due to deficiency of niacin/Tryptophan[4]. Its multifactorial, however the commonest cause is alcoholism[5]. Alcoholic liver disease which is present in half of alcohol dependent population also contributes to cutaneous findings[6]. Poor diet, malabsorption of Pyridoxine and thiamine deficiency further contribute to it[7]. Although outbreaks of Pellagra are common during crisis in developing countries but diagnosis is scarce and may be mistaken for vast array of diseases as the presentation often varies. The contemporary rarity of pellagra has limited scope of clinical exposure to the disease, causing failure to recognize, diagnose, and treat in its early stages[8]. Several reports have commented on fatal consequences of delaying diagnosis[9]. If diagnosed accurately and timely, skin lesions and other manifestations resolve quickly[10]. A study published in 1981 states that in chronic alcoholics with certain neuropsychiatric and gastrointestinal symptoms Pellagra should be suspected even in absence of skin manifestations[9]. The typical lesions occur over nape of neck known as Casals's necklace and erythema occurs over sun-exposed areas[11]. However, in this case the highlight is the atypical presentation involving only dorsum of forearms and giving a burnt appearance excluding involvement of any other region. The oral mucosa is involved in 1/3rd of cases presenting as ulcers, soreness and inflammation. GI symptoms include diarrhoea, reduced appetite, gastritis. Neuropsychiatric manifestations may present as headache, irritability, apathy, which if left untreated may progress to stupor, coma and eventually death[11]. It has an insidious onset and course and 1st symptoms to usually present are rash and diarrhoea before neuropsychiatric manifestations. Hence, these maybe presented first to general physicians, dermatologists or gastroenterologists where it may be overlooked or missed[9]. Patients if left untreated dementia sets in and can lead to death within 4-5years. Hence, consultation liaison psychiatry plays an important role here for sensitization and early treatment and prevention of neuropsychiatric sequelae.

Conclusion

Chronic alcoholics need evaluation for Pellagra amongst other nutritional deficiencies which due to diverse presentation can be missed. Early diagnosis and treatment can avoid impending neuropsychiatric complications. Due to participation of numerous disciplines consultation liaison psychiatry is vital here.

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